



Weekly Summary Report

USEPA Oversight, Sauget Area 2, Sauget, IL

WA No. 224-RXBF-05XX / Contract No. 68-W6-0025

Week Ending Friday January 2, 2004

This report summarizes the Remedial Action (RA) work conducted by Solutia and its contractors from December 29, 2003 through January 2, 2004. The current RA fieldwork consists of barrier wall excavating, backfilling, and site preparation.

Contractors Onsite

Inquip Associates Inc. (barrier wall construction contractor)
Pangea Group (construction support services, primary subcontractor to Inquip)
PSI (Professional Service Industries) (geotechnical testing services, subcontractor to Inquip)
URS (primary consultant for Solutia)

Work Performed This Week

Solutia Bankruptcy / Production Halt

Inquip continued work during the week to maintain trench stability and continued to excavate the 'notch' between stations 13+20 and 11+40. The notch has not been excavated to total depth, but on both sides the trench is at bedrock. Production excavation and backfilling occurred during the week on December 29 and 30, with work throughout the remainder of the week consisting of trench and site maintenance activities.

Groundwater Migration Control System (GMCS)

The Groundwater Migration Control pumping system flow rate fluctuated broadly during the week as the river level decreased until December 31, and increased thereafter, with a variance of approximately 2½ feet in the river elevation. The pumping system flow rate at the close of the week was 677 gallons per minute (gpm), with extraction well # 2 pumping at a significantly higher rate (throughout the week) than the other two extraction well pumps. The gradient from the river to the water levels at the piezometers was maintained at generally less than one foot difference in elevation. Piezometer P2E, located adjacent to the trench section backfilled to ground surface, is generally reading a higher water level than the other three piezometers located upgradient of the barrier wall alignment.

Table 1 shows the river and piezometer water elevations on January 2, at 10:00 AM.

Table 1
River and Piezometer Water Elevations – January, 2 2004 (10:00 AM)

	Elevation (ft above mean sea level)
River Level	385.0
Piezometer 1S (northern-most Pz)	383.9
Piezometer 2E	384.6
Piezometer 3E	384.1
Piezometer 4E (southern-most Pz)	384.2

Site Preparation

Pangea worked on site December 29 and 30, predominantly pumping stormwater. Pangea also checked and maintained silt fences and clay berms around the exclusion zone as necessary.

Stormwater

Following a rain event on December 28, 2003 Pangea pumped stormwater for two days. Contact stormwater from the exclusion zone and the spoils containment area on the landfill was pumped into the north modutank. The flocculation system and the stormwater treatment system (filtration skid and carbon treatment columns) did not operate during the week. At the end of the week the north modutank was near full and the south modutank was approximately ½ full. In other words, approximately 350,000 gallons of stormwater are currently contained in the two modutanks.

Pangea pumped non-contact stormwater from the ditch outside the exclusion zone near station 10+80, through a 6-inch HDPE pipeline to the drainage ditch on the eastern Solutia property boundary of Site R. The non-contact stormwater pumps were set to automatically operate based on probes measuring water levels in the ditch over the long weekend. The pipeline was laid across the exclusion zone into the drainage ditch on the western edge of Site R adjacent to the river.

Slurry Mixing

Two truckloads of bentonite gel were mixed into slurry stored in the holding ponds on December 30, 2003. Approximately 35 tons of bentonite gel was used to mix slurry this week. The slurry, when pumped from the south holding pond to the trench, was tested frequently to assess its viscosity and adjusted with a blending pump using water from the fire hydrant, as necessary. The viscosity of the slurry was measured using a Marsh funnel, with results obtained during the week generally satisfactory.

Barrier Wall Construction

Inquip has opened the trench to approximately 1,480 feet in length along the barrier wall alignment, from station 25+40 towards station 10+60 (please refer to Solutia's map for locations). Only one clamshell rig operated during the week, on December 29 and 30, 2003. The daylighted backfill (i.e. at ground surface) advanced approximately 80 feet during the week to station 25+40.

Bentonite slurry was pumped into the trench as needed to keep the excavation open. An Inquip crew was onsite December 29, 30, and January 2 checking the site conditions, trench slurry levels, and performing maintenance as needed through the week. Top and bottom trench slurry samples, together with fresh slurry samples were tested by PSI on these three days. The parameters tested on the slurry samples consisted of viscosity, unit weight, filtrate loss, pH, and sand content. The test results generally met the specifications.

Trench depths were measured on three days during the week (AM) with 100 linear feet spacing along the trench and 20-foot spacing of measurements on either side of the backfill toe. The trench depth measurements from the morning of January 2, are shown in Table 2, depicting the weekly progress. Construction progress by January 2, 2004 is shown below. Graph 1 shows the progress of the trench in comparison to the previous week. Graph 2 shows the overall progress of the barrier wall construction.

During the week, Inquip mixed and placed into the trench approximately 360 cubic yards of backfill material. Backfill was placed on December 29 and 30, during the week. The backfill consisted of spoils with the addition of both clean clay soil at 15 percent and bentonite at 2 percent of backfill volume. Spoils were transferred from the spoils containment area on the land fill to the backfill mixing pad in the north of the exclusion zone on one day during the week to provide materials for mixing backfill. Backfill was mixed and pushed into the trench using a bulldozer.

The backfill was tested by PSI for slump, unit weight and moisture content. The unit weight of backfill placed during the week measured between 123 and 124 pounds per cubic foot (pcf). Slump test results were between 3.5 and 4.0 inches. All test results met the minimum requirements.

Preliminary results were received during the week of Quality Assurance samples for permeability analysis conducted by URS's lab in Totawa, New Jersey. The three samples all confirmed the backfill was passing the permeability specification.

Prior to backfiling, the bottom of trench was cleaned using a clamshell rig. Depth-to-bottom measurements were made every 10 linear feet of trench to ensure the bottom of the trench was at a consistent depth and on top of bedrock. These depth measurements were performed with the clamshell rig's instrumentation and confirmed manually with the downrigger (plumbob on wire). Additionally, two samples of were collected by URS and PSI with a clam sampler from the top of the placed backfill in the trench. These backfill samples were visually checked to ensure that the backfill surface was clean and free of any sand prior to placing additional backfill.

Table 2

Trench Profile (Downrigger Measurements) for the Barrier Wall Trench – December 22, 2003 (AM)

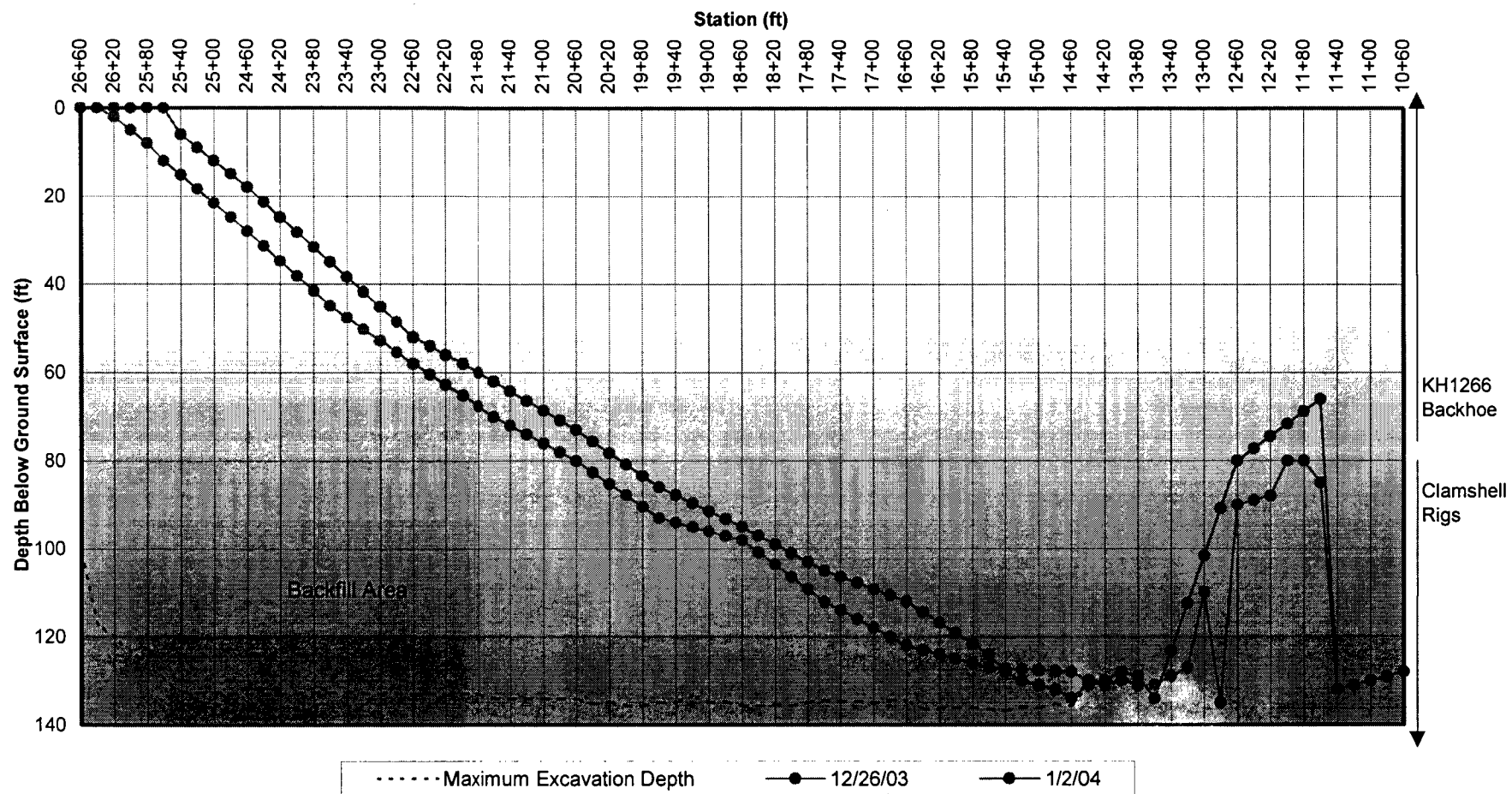
Station ID	Depth to bottom (ft below ground surface)
10+60	116
11+60	66
12+60	80
13+60	134
13+80	129
14+00	128
14+20	130
14+40	131
14+60	134
14+80	132
15+00	131
15+20	130
15+40	128
15+60	124
16+60	112
17+60	105
18+60	95
19+60	86
20+60	73
21+60	62
22+60	52
23+60	35
24+60	18
25+40	6
25+40 to 27+50	Backfill daylighted (level with ground surface)

Note: Distances between stations where trench depth measurements were read varies in Table 2. Measurements are separated by 100 linear feet of trench in most areas, however, the area that delineates the toe of the backfill is measured every 20 feet.

Construction Progress

Graph 1

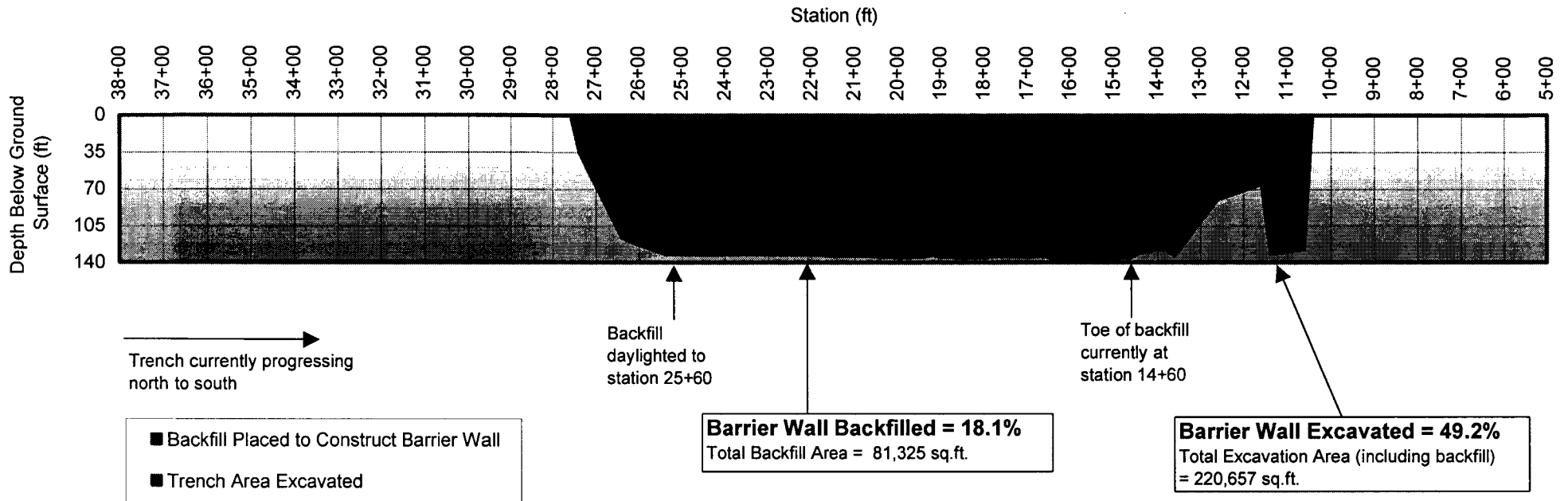
Weekly Barrier Wall Construction Progress Dec. 29th 2003 to Jan. 2nd 2004



Note: Data plotted for week through AM measurements on 1-2-04.
Some data points are interpolated between the available data points where trench depth measurements were read.

Graph 2

Barrier Wall Construction Progress by January 2, 2004

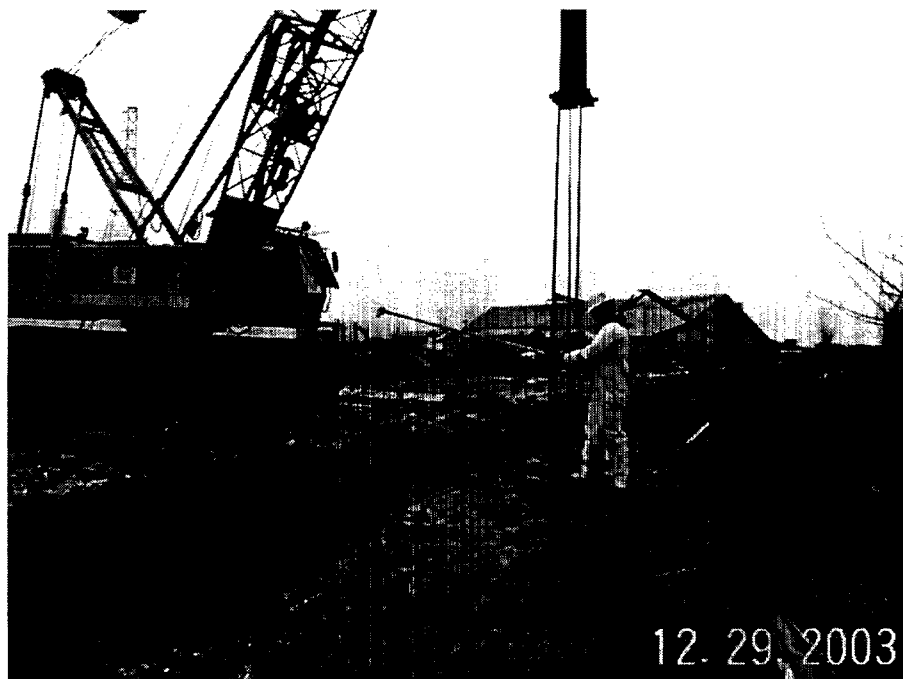


Note: Data plotted for week through AM measurements on 1-2-03.
Backfill and Excavation Areas and Percentages are calculated daily by URS based on excavation logs from cranes.

Photos from week - December 29, 2003 through January 2, 2004:



'Daylighted' section of trench (backfill at ground surface) extended during week by 80 feet (December 29, 2003).



Trench cleaning and downrigger confirmation depths (December 29, 2003).